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## HIGHER EDUCATION, DUPLICATIONS

1972

Report No. 40  
To the 43rd Legislative Assembly

MONTANA LEGISLATIVE COUNCIL  
State Capitol  
Helena, Montana

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# HIGHER EDUCATION, DUPLICATIONS

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## PREFACE

The directive of the 42nd Legislature, that the Legislative Council study higher education in Montana in order to avoid unnecessary duplication of programs and degrees, was assigned by the Legislative Council to its University Subcommittee.

Because of the complex structure of higher education in Montana, and because of limited time, resources and staff available for the study, the subcommittee sought to fulfill the mandate of Senate Joint Resolution No. 9 through cooperation with the Board of Regents, the Montana University System, the Council of Presidents and the Academic Vice Presidents of the six units of the University System and the Vocational Technical Advisory Council.

A valid review of programs and degrees offered by the Montana system of higher education must originate within the units of the system; not only because the necessary expertise and resources are available there, but also because reform resulting from an internal examination is more likely to succeed than that imposed externally. Of course, the most effective stimulus for internal review and reform comes from the legislature's power to limit budgets.

As this report will show, the six units of the University System have begun making a cooperative review of the University System's programs and degrees. The initial studies have focused upon intra-unit review; however, coordination among the units is receiving increased emphasis. These studies are, at the present time, of an unrefined nature. Much remains to be done in terms of determining goals for higher education in Montana and, especially, in translating these goals into procedures for identifying areas which should be given greater emphasis, in the form of increased budgeting, or reduced emphasis. Review, authorization, and evaluation procedures appear to be in a formative stage for this comparatively new educational and training program. Therefore, the function and authority in this area is unclear, as is the relationship of the Vo-tech Advisory Board and the Vo-tech Division of the Superintendent of Public Instruction's office given realignment of jurisdiction which will occur when the new state constitution becomes effective. The public colleges and universities in Montana have started the process of internal review and inter-unit cooperation. The responsibility for ensuring that this process is continued and given greater impetus in the future lies with the 43rd Legislature.

Program review among the five vocational and technical centers and the other public institutions offering vocational-technical courses, the community colleges, the private colleges in Montana and the six units of the University System has not reached even the initial study stage that has begun within the six units of the University System. Again, limited budgets, whatever their source, will provide the impetus for this review and for the

reforms necessary to eliminate the duplication of effort among these institutions.



## RECOMMENDATIONS

The Montana Legislative Council recommends:

1. *That the six units of the University System continue and expand their internal review of programs and degrees offered and extend their interunit cooperative review to the department level in order to make more efficient use of the resources devoted to higher education in Montana.*
2. *That the five vocational-technical centers, the community colleges, and colleges and high schools offering post secondary vocational-technical training establish formal, cooperative review procedures to eliminate unnecessary duplication of programs offered.*
3. *That the 43rd Legislature renew its mandate to the Legislative Council in order that an interim arm of the Legislature will be in a position to encourage internal review of higher education in Montana and to evaluate the review made by the institutions of higher education.*
4. *That the six units of the University System adopt a uniform system of accounting.*



SENATE JOINT RESOLUTION NO. 9

A RESOLUTION OF THE SENATE AND HOUSE OF REPRESENTATIVES OF THE STATE OF MONTANA REQUESTING THE LEGISLATIVE COUNCIL TO STUDY THE MONTANA EDUCATIONAL SYSTEM, COMMUNITY COLLEGE SYSTEM AND POST SECONDARY VOCATIONAL TECHNICAL CENTERS WITH A VIEW TOWARD SPECIALIZATION OF THE VARIOUS UNITS THEREOF BY AVOIDING UNNECESSARY DUPLICATION IN THE PROGRAMS AND DEGREES OFFERED BY EACH UNIT.

WHEREAS, the Montana university system consists of six units: the university of Montana at Missoula, Montana state university at Bozeman, Montana college of mineral science and technology at Butte, western Montana college at Dillon, eastern Montana college at Billings, and northern Montana college at Havre; and

WHEREAS, the community college system consists of three community college districts: Flathead Valley community college, Dawson community college, and Miles community college; and

WHEREAS, the post-secondary vocational-technical center system consists of five (5) centers located at Billings, Butte, Great Falls, Helena and Missoula; and

WHEREAS, private educational institutions contribute to the total education experience in the state, consideration should be given to their programs and curriculum on a cooperative basis; and

WHEREAS, in recent years there has been a tendency toward proliferation of the number and types of programs and degrees offered by the various units of the Montana educational system; and

WHEREAS, there is need to study the programs and offerings of each of the four (4) systems cited above to establish guidelines to provide future development of education beyond the secondary level.

NOW, THEREFORE, BE IT RESOLVED BY THE SENATE AND HOUSE OF REPRESENTATIVES OF THE STATE OF MONTANA:

That the legislative council is requested to conduct a study of the Montana higher educational systems with a view toward specialization of the various units thereof by avoiding unnecessary duplication in the programs and degrees offered by each unit in order to better utilize the educational resources of the state and strengthen the system; and

BE IT FURTHER RESOLVED, that the legislative council present

its findings and recommendations to the board of regents and to the forty-third legislative assembly; and

BE IT FURTHER RESOLVED, that the secretary of the senate is directed to send a copy of this resolution to the executive director of the legislative council and to the board of education and the regents.

## EXISTING DUPLICATIONS

The Legislative Council, realizing that duplication at the undergraduate level is a necessity if units of the University System are to be diversified beyond single function institutions, focused its attention on the graduate level. Also, since the cost per pupil of graduate education is approximately three times the cost of undergraduate education,<sup>1</sup> unnecessary duplication at the graduate level results in greater inefficiency than at the undergraduate level.

The Council noted the following areas of duplication at the doctorate and master's degree level within the University System (see Tables 1 and 2). No judgment is rendered concerning whether this duplication is necessary or unnecessary.

## PROGRAM REVIEWS

In response to Senate Joint Resolution No. 9 and to inquiries from legislators, educators and the general public, the academic vice presidents of the six units of the University System prepared a treatise, titled ACADEMIC PLANNING, for approval by the unit presidents, the Board of Regents and eventual submission to the Legislative Council. The report details enrollment figures for degree programs, both graduate and undergraduate, at each of the six units. It also sets guidelines for program analysis within the University System and lists the program reviews which have been initiated at each unit together with the initial results of these reviews.

These are the guidelines set forth in the ACADEMIC PLANNING report:

- A. What is the enrollment in each program?
- B. What are the enrollments in the specific courses within the program?
- C. What courses serve other programs and what are the programs?
- D. What other departments support the programs?
- E. Is the program relevant to the needs of the students, times and the State?
- F. Are faculties and facilities available?
- G. What would be the dollar savings if the program did not exist--to the State, students and people?
- H. Should or could the program be offered on a co-operative basis?

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<sup>1</sup>The More Effective Use of Resources, The Carnegie Commission on Higher Education. New York: McGraw Hill, 1972, pp. 36-37.

TABLE 1

DOCTORATES<sup>2</sup>

	<u>Montana State University</u>				<u>University of Montana</u>			
	Degrees Granted			Majors Enrolled	Degrees Granted			Majors Enrolled
	<u>68-69</u>	<u>69-70</u>	<u>70-71</u>	<u>Fall 1971</u>	<u>68-69</u>	<u>69-70</u>	<u>70-71</u>	<u>Fall 1971</u>
Ph.D. Botany	0	1	4	6	1	1	0	14
Ph.D. Chemistry	4	4	3	27	1	1	4	7
Ph.D. Mathematics	1	1	5	11	0	0	2	8
Ph.D. Microbiology	1	1	2	10	1	2	1	5
Ed.D. (for all Education entries)				20				45
Elementary Ed.	0	0	1		0	0	1	
Administration	1	1	3		3	4	4	
Higher Education	4	2	2		1	0	0	
Secondary Ed.	0	1	0					
Elementary School Administration	0	0	0					
Business Ed.					0	0	1	
Counseling and Guidance					3	2	3	
Curriculum					0	1	2	
Music Education					0	1	1	
Social Science					0	0	1	
Teacher Education					0	0	1	

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<sup>2</sup>Academic Planning - A Report to the Council of Presidents of the Montana University System, Academic Vice Presidents of the Montana University System, June 1972.

# MASTER'S DEGREES<sup>3</sup>

## Field

Art  
History  
Botany  
Business Education  
Chemistry  
Geology (Earth Sciences at MSU)  
Mathematics  
Microbiology  
Physical Education  
Physics  
Psychology  
Zoology  
Education:

## Units Offering Degree

MSU	U of M	
MSU	U of M	
MSU	U of M	
MSU	U of M	
MSU	U of M	
MSU	U of M	Mont. Tech.
MSU	U of M	
MSU	U of M	
MSU	U of M	
MSU	U of M	
MSU	U of M	

## Eastern Montana College

Master of Science in Education  
Elementary  
Early Childhood Education  
Elementary Art  
Elementary Education  
Elementary English  
Elementary Mathematics  
Library Science  
Reading  
Social Studies  
General Curriculum  
Guidance & Counseling  
Special Education  
Learning Disabilities  
Mentally Retarded  
Physically Handicapped  
Secondary  
Master of Science in Rehabilitation Counseling

## Montana State University

Master of Education  
Elementary Education  
Elementary School Administration  
Secondary Education  
Physical Education  
Administration  
Guidance & Counseling  
Higher Education  
School Administration  
Master of Applied Art  
Master of Nursing

## University of Montana

Master of Arts for Teachers of English  
Master of Science for Teachers of Biological Sciences  
Master of Science for Teachers of Chemistry  
Master of Science for Teachers of Health, Physical Education and Recreation  
Master of Arts for Teachers of Mathematics  
Master of Business Administration  
Master of Education  
Master of Fine Arts  
Art  
Creative Writing  
Drama  
Master of Forestry  
Master of Music  
Master of Music Education  
Master of Arts Education

## Western Montana College

Master of Science in Education

## Northern Montana College

Master of Science  
Elementary Education  
Vocational-Technical Education

<sup>3</sup>Ibid.

- I. Is it within the institution's role and scope?
- J. Does the program attract and retain quality faculty and quality students?
- K. To what extent does the research effort benefit the State directly?
- L. Does the program generate Federal support?
- M. To what extent is the program available within the State or the region?
- N. What has the faculty committee reported on the program?
- O. Has the program been reviewed by the professional society and what have they reported?
- P. Other criteria to be developed on a formal basis.<sup>4</sup>

The Legislative Council accepts these as valid guidelines for program reviews. Hopefully, the institutions will be able to translate these guidelines into common criteria which will permit comparisons among programs at the various units to ensure that the limited resources which can be devoted to higher education are providing maximum benefit, both to the students and the state as a whole.

In the ACADEMIC PLANNING report each unit lists the program reviews it has undertaken and the initial results of these reviews.

#### EASTERN MONTANA COLLEGE

Eastern has instituted a series of Campus Action Teams composed of volunteers from the student body, faculty and staff. These teams are reviewing numerous aspects of the institution's scope and program including its curriculum and instructional program. In addition, Eastern is conducting a study to predict academic program needs over a twenty-year period with special emphasis on the first ten years.

As an example of the result of program review, Eastern has discontinued the Russian program within the Foreign Language Department.<sup>5</sup>

#### MONTANA COLLEGE OF MINERAL SCIENCE AND TECHNOLOGY

All academic areas at Montana Tech are presently under intensive study with every effort being made to eliminate unnecessary internal duplication, courses with limited objectives and courses with limited utilization. Departmental organization is the subject of a study seeking realignment for better utilization of manpower and resources.<sup>6</sup>

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<sup>4</sup>Ibid., p. 4.

<sup>5</sup>Ibid., p. 6.

<sup>6</sup>Ibid., p. 9.



### MONTANA STATE UNIVERSITY

Montana State has initiated two internal reviews of academic programs and has been cooperating with the University of Montana in an effort to strengthen graduate education at the two units by developing cooperative programs, eliminating unnecessary duplication and consolidating marginal programs.

A review initially directed toward the Master's in Applied Science has been expanded to a review of all graduate programs by the Executive Board of the Graduate Faculty.

The Academic Council Coordinating Committee has completed a review of all academic programs which recommends changes in the University's administrative structure in order to eliminate internal duplication.

Because of low enrollment, Montana State University has suspended its M.S. in Horticulture, M.S. in Agricultural Products Utilization and B.S. in Entomology. The University has halted new admissions in the M.S. in Applied Science until the Graduate Faculty completes its review of the program.<sup>7</sup>

### NORTHERN MONTANA COLLEGE

Since the 1970-71 academic year, the Curriculum Committee at Northern Montana College has engaged in a program analysis which will review every program and course offered at least once every three years. Factors reviewed during the program analysis include the number of graduates and enrolled students, enrollment trends, enrollment in required classes within the program, graduate placement, program cost and the relevance of the program to Northern Montana College's stated role and scope.

As a result of this analysis, the program in Chemical Technology has been suspended, eliminating one staff position; Construction Engineering Technology and Mechanical Engineering Technology will be combined into one program which will permit the elimination of one staff position; and the Agribusiness and Agriservices programs are being combined into one program.

Spanish will probably be dropped from the Foreign Language Department and football will no longer be an intercollegiate sport. These eliminations will result in several staff reductions.

By Fall of 1973 Northern Montana College expects to have reduced the faculty by ten percent unless enrollments exceed anticipated levels.

Northern Montana College will propose the addition of the

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<sup>7</sup>Ibid., p. 9.

Bachelor of Technology degree in order to expand its function in vocational technical training and to avoid further ruinous competition and duplication with the five area Vocational-Technical Centers.<sup>8</sup>

#### UNIVERSITY OF MONTANA

Ph.D. programs at the University of Montana have been the subject of a two year study by the Graduate Council. The Sociology Department has requested an external review of its doctoral program by the American Sociological Association. Ad hoc student-faculty groups are examining ecology and environmentally oriented courses and statistics for possible duplication. The academic deans are attempting to consolidate the University's various community service and outreach programs into a single coordinating unit. During 1972-73 the possibility of combining the biological science units into a single administrative entity will be studied. The University is also studying the consolidation of all allied health professions and services into one program.

The University has limited admissions into the graduate programs in Education, halted admissions into the Ph.D. in History and deactivated the Ph.D. program in Pharmacy.<sup>9</sup>

#### WESTERN MONTANA COLLEGE

Western's Curriculum Committee has primary responsibility for program analysis. The Committee has recommended limiting the number of credits a student may accrue in his teaching fields of concentration, alternating on a two-year basis upper division courses offered and requiring that each department offer at least twelve credits at the freshman level, sophomore level, and upper division level each year.

Western has eliminated the Foreign Language Department due to low class enrollments and during one quarter of the 1971-72 academic year cancelled twelve classes in which fewer than ten students were enrolled.<sup>10</sup>

#### UNIFORM ACCOUNTING SYSTEM

The data necessary to make comparisons of the cost of similar programs offered by different units of the University System is presently non-existent. Dissimilar accounting methods at each

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<sup>8</sup>Ibid., pp. 16-17.

<sup>9</sup>Ibid., p. 20.

<sup>10</sup>Ibid., pp. 26-27.

unit prevent meaningful cost comparisons. If the University System accepts the State's uniform accounting system, and it appears it will, the first step toward achieving uniform data will have been taken.

Models have been developed by the Western Interstate Commission on Higher Education which allow institutions of similar size and function to compare input and output for specific program areas. If the appropriate data can be developed by the units of the University System, these models can be used to ensure more efficient use of resources devoted to public higher education.

The Carnegie Commission on Higher Education has made the following recommendations concerning cost behavior.

The Commission recommends that all relatively large institutions of higher education maintain an office of institutional research or its equivalent and that relatively small institutions seek to enter into arrangements with nearby similar institutions to conduct jointly sponsored programs of institutional research.

The Commission also recommends that all appropriate agencies--the U. S. Office of Education, the Southern Regional Education Board, the Western Interstate Commission on Higher Education, and similar bodies--give high priority to the development of more adequate data on the behavior of costs, income, and output in higher education.<sup>11</sup>

## CONCLUSIONS

Throughout the sixties enrollments at the units of the University System showed steady growth. An enrollment plateau now appears to have been reached and is projected by the University System to continue throughout the seventies. Several factors including a reduced rate of population increase, the termination of student draft deferments and an increasing tendency for high school graduates to postpone immediate entry into college have contributed to this decreased rate of growth for college enrollment.

All units of the University System, except the University of Montana, experienced smaller enrollments during fall quarter 1971 than fall quarter 1970. Enrollment for the system as a whole is again expected to decline in the fall of 1972.

Reduced enrollments will cause funding problems unless the units of the University System increase per student revenues or reduce total operating costs. Per student revenues may be increased by

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<sup>11</sup>Op. Cit., Carnegie Commission, pp. 46-47.

charging higher rates for tuition, dorms and food services, or by maintaining or increasing legislative appropriations. Total operating costs can be reduced by staff cutbacks, deferring capital expenditures or avoiding necessary maintenance, library and student aid expenditures.

Competition for legislative appropriations and tuition fees may be increased by the present enrollment trends, not only among the units of the University System, but also among the University System, the Community Colleges and the Area Vocational-Technical Centers.

*The Council recommends that the six units of the University System continue and expand their internal review of programs and degrees offered and extend their interunit cooperative review to the department level in order to make more efficient use of the resources devoted to higher education in Montana.*

*It further recommends that the five vocational-technical centers, the community colleges, and colleges and high schools offering post secondary vocational-technical training establish formal, cooperative review procedures to eliminate unnecessary duplication of programs offered.*

The Carnegie Commission has recommended, "That higher education should undertake internally the constructive actions necessary to get more effective use of resources and not wait for less constructive--and sometimes destructive--actions to be required because of external initiative."<sup>12</sup> However, information concerning these internal reviews should be made available to the Montana Legislature.

*The Council recommends that the 43rd Legislature renew its mandate to the Legislative Council in order that an interim arm of the Legislature will be in a position to encourage internal review of higher education in Montana and to evaluate the review made by the institutions of higher education.*

*It further recommends that the six units of the University System adopt a uniform system of accounting.*

<sup>12</sup>Ibid., p. 152.



